REMARKS

Rejections under 35 U.S.C. §102(b)

The Examiner maintains the rejection of claims 1-8, 10-20, and 22-24 under 102(b) as being anticipated by Nakayama et al. (EP 0450 862 A2). Nakayama et al. is asserted to teach an organic thin film element having all of the features of the present claimed invention, with the exception of the features of claims 9 and 21. Applicants traverse this rejection and withdrawal thereof is respectfully requested.

The present invention, as encompassed by claim 1, is drawn to a device for electrical contacting or for the isolation of organic or inorganic semiconductors in electronic or optoelectric devices comprising

a substrate, either in the form of

a) a contact material consisting of an organic or inorganic electrical conductor, or

b) an isolating material consisting of an organic or inorganic dielectric; and

a patterned or unpatterned charge transfer material on or at a surface of the substrate wherein the charge transfer material

a) comprises charge transfer components in the form of donors or acceptors,

b) forms a self-assembling layer of one or more atomic and/or molecular layers,

c) has a direct or indirect bond to the surface of the substrate, and

d) forms a charge transfer complex with an organic or inorganic semiconductor, wherein the charge transfer material forms a donor or acceptor material in the charge transfer complex depending upon respectively whether the semiconductor itself is an acceptor or donor material.

Thus, with the present invention the charge transfer components of the charge transfer material act as either donors or acceptor molecules, depending on whether the overall device has an isolating or conducting function. A charge transfer complex is only achieved when in conjunction with another material that also comprises donor or acceptor molecules. For example, with the present invention, if the charge transfer material is made of donor molecules, a charge transfer complex is only achieved if the semiconductor comprises charge acceptors. Whether the charge transfer material acts as a donor or acceptor depends on whether the semiconductor is, in turn, a donor or acceptor material.

The present invention is both structurally and functionally distinct from the device of Nakayama et al. The device disclosed in Nakayama et al. is structurally distinct from the present invention in that the device of the reference is an active organic thin-film material having a charge-transfer complex formed from a mixture of donors and acceptors. See column 1, lines 22-55. That is with Nakayama et al. the organic thin film is itself a charge transfer complex. The thin-film material of Nakayama et al. has a mixture of donor and acceptor molecules in

the charge transfer layer to provide a relatively high anisotropy of the relative dielectric constant.

Nakayama et al. teach in column 2, beginning at line 3, that a feature of the device disclosed in the reference is achieving a macroscopic neutral-ionic transition in the charge transfer complex under an applied electric field. As a result, it is important that the direction of the electric field coincides with the direction of the stacking axis of the donor and acceptor molecules. To achieve this feature, the device of Nakayama et al. has a layer that contains both donor and acceptor molecules. With Nakayama et al. a mixed stacked charge transfer complex crystal in which the molecules are stacked with the molecular planes facing each other is used. When the mixed stacked charge transfer complex is used, a structure in which the donor and acceptor molecules are alternately stacked is automatically formed during film growth. Thus, the device of Nakayama et al. is structurally distinct from the present invention because the charge transfer layer of Nakayama et al. is made from a mixture of both donor and acceptor molecules to achieve a neutral-ionic transition under application of an electric field. The present invention on the other hand has a charge transfer layer with a charge transfer material that is either donor or acceptor molecules, not a mixture of both. Hence the charge transfer material (3) of the invention is both structurally and functionally different from the charge-transfer complex (12) of Nakayama et al. As such, the invention of claim 1 is clearly

distinguished from the device of Nakayama et al. Withdrawal of the rejection is respectfully requested.

In addition, new claim 25 has been added wherein the charge transfer material is defined to be a compound from the recited Markush Group. Charge transfer materials of Nakayama et al. are disclosed at column 8, lines 43-56. The charge transfer materials of Nakayama et al. are all complex organic molecules, which are significantly different from the recited organic charge transfer materials of claim 25. As such, claim 25 is neither anticipated by nor obvious over Nakayama et al. Support for new claim 25 may be found on page 7 of the specification.

As the above-indicated remarks address and overcome the objections and rejections of the Examiner, withdrawal of the objections and rejections and allowance of the claims is respectfully requested.

Should the Examiner have any questions, regarding the present application, he is requested to please contact, MaryAnne Armstrong, PhD (Reg. No. 40,069) in the Washington DC area at (703) 205-8000.

A marked-up version of claim 1 showing all changes is attached hereto.

Applicants request a three (3) month extension of time for filing the present response. The required fee is enclosed.

If necessary, the Commissioner is hereby authorized in this,

concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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3672-0111P

MARKED-UP VERSION SHOWING CHANGES

IN THE CLAIMS

Claim 1 has been amended as follows.

1. (Amended) A device for electrical contacting or for the isolation of organic or inorganic semiconductors in electronic or optoelectric devices comprising

a substrate, either in the form of

a) a contact material consisting of an organic or inorganic electrical conductor, or

b) an isolating material consisting of an organic or inorganic dielectric; and

a patterned or unpatterned charge transfer material on or at a surface of the substrate wherein the charge transfer material

a) comprises charge transfer components in the form of donors ~~and/or~~ **or** acceptors,

b) forms a self-assembling layer of one or more atomic and/or molecular layers,

c) has a direct or indirect bond to the surface of the substrate, and

d) forms a charge transfer complex with an organic or inorganic semiconductor, wherein the charge transfer material forms a donor or acceptor material in the charge transfer complex depending upon respectively whether the semiconductor itself is an acceptor or donor material.